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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/534,680

12/27/2005

Detlev Schulz

MEISS85.004APC

7411

20995

7590

08/19/2009

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EXAMINER

SHAH, SAMIR

ART UNIT

PAPER NUMBER

1794

NOTIFICATION DATE

DELIVERY MODE

08/19/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/534,680	Applicant(s) SCHULZ ET AL.	
	Examiner SAMIR SHAH	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on May 12, 2005 (Pril. amen.).
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) 8-14 and 26-34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 15-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 May 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>See Continuation Sheet</u> . | 6) <input type="checkbox"/> Other: _____ |

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :20051227, 20070821, 20070918, 20090216.

DETAILED ACTION

Election/Restrictions

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

2. In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-7 and 15-25, drawn to a product of multilayered laminate for tubes and similar type packaging an embedded barrier layer.

Group II, claim(s) 8-14 and 26-34, drawn to a process for a method of producing multilayered laminate for tubes and similar type packaging an embedded barrier layer.

3. The inventions listed as Groups I-II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: multilayered laminate for tubes and similar type packaging an embedded barrier layer, claim 1 is not novel. However, in order to be considered a common special feature, any such feature must be novel and non-obvious. The above described technical features are not novel and non-obvious. Gibbons et al. (U.S. Patent 4,983,431) discloses a multi-layer film wherein it comprises an abuse-resistant polymeric resin such as a polyamide (embedded barrier layer) (20, figure 1) and a metal such as aluminum foil (16, figure 1) (column 5, lines 10-16).

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4. Because all of the common technical features between groups I and II are disclosed in the prior art, such common technical features cannot be special technical features under PCT Rule 13.2. As a result, the claims corresponding to Groups I and II lack of unity invention.

5. During a telephone conversation with Carolyn Delany on July 27, 2009 a provisional election was made without traverse to prosecute the invention of group I, claims 1-7 and 15-25. Affirmation of this election must be made by applicant in replying to this Office action. Claims 8-14 and 26-34 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

6. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

7. The examiner has required restriction between product and process claims. Where applicant elects claims directed to the product, and the product claims are subsequently found allowable, withdrawn process claims that depend from or otherwise require all the limitations of the allowable product claim will be considered for rejoinder. All claims directed to a nonelected process invention must require all the limitations of an allowable product claim for that process invention to be rejoined.

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8. In the event of rejoinder, the requirement for restriction between the product claims and the rejoined process claims will be withdrawn, and the rejoined process claims will be fully examined for patentability in accordance with 37 CFR 1.104. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102, 103 and 112. Until all claims to the elected product are found allowable, an otherwise proper restriction requirement between product claims and process claims may be maintained. Withdrawn process claims that are not commensurate in scope with an allowable product claim will not be rejoined. See MPEP § 821.04(b). Additionally, in order to retain the right to rejoinder in accordance with the above policy, applicant is advised that the process claims should be amended during prosecution to require the limitations of the product claims. **Failure to do so may result in a loss of the right to rejoinder.** Further, note that the prohibition against double patenting rejections of 35 U.S.C. 121 does not apply where the restriction requirement is withdrawn by the examiner before the patent issues. See MPEP § 804.01.

Claim Objections

9. **Claim 3** is objected to because of the following informalities: claim 3 recite “the laminate according to one of claim 1.” It should say “the laminate according to claim 1.” Appropriate correction is required.
10. **Claims 6-7 and 19-20** are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the

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claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claims 6-7 and 19-20 each fails to further limit the scope of the claim on which they each depend, namely claim 1, given that 6-7 and 19-20 are broader than claim 1 since they each require layers not required in claim 1, i.e. inner sealing layer, central sealing layer, etc.

11. **Claim 24** recites "material is laquer-like." The claim should read "material is lacquer-like." Appropriate correction is required.

Claim Rejections - 35 USC § 112

12. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

13. **Claims 1-7 and 15-25** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

14. Claim 1 recites "similar foil-type packaging." It is not clear what is meant by similar or how close the packaging would have to the multi-layer laminate to be considered "similar". The addition of the word "type" extends the scope of the claims so as to render them indefinite since it is unclear what "type" is intended to convey. The addition of the word "type" to the otherwise definite expression renders the definite expression indefinite by extending its scope. *Ex parte Copenhaver*, 109 USPQ 118 (Bd. App. 1955).

15. Claim 2 recites the limitation "the metal foil or layer" in line 3. There is insufficient antecedent basis for this limitation in the claim.

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16. Claims 6, 7, 19, and 20 recite multiple layers such as inner sealing layer, central sealing layer, metal foil, barrier layer, and outer structure and they all are depended on claim 1. However, it is unclear and renders the claim vague and indefinite since claim 1 only comprises a barrier layer and a metal foil. Also, it is not clear what is meant by "outer structure" or what this encompasses.

17. Claim 23 recites the limitation "the inner sealing layer" in line 2. There is insufficient antecedent basis for this limitation in the claim.

18. Claim 24 recites "lacquer-like". It is not clear what is encompassed by this phrase or what would be considered "like" lacquer.

Claim Rejections - 35 USC § 102

19. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

20. **Claims 1-4, 15, 16, 18, and 21-22** are rejected under 35 U.S.C. 102(b) as being anticipated by Gibbons et al. (U.S. Patent 4,983,431).

21. Regarding claim 1, Gibbons discloses a multi-layer film which comprises an abuse-resistant polymeric resin such as a polyamide (embedded barrier layer) (20, figure 1) which is embedded between caulk layers and a metal such as aluminum foil (16, figure 1) (column 5, lines 10-16).

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22. Regarding claim 2, Gibbons discloses a multi-layer film wherein the abuse-resistant polymeric resin (barrier layer) is arranged between inside the inner sealing layer (24, figure 1) and metal foil layer (16, figure 1).

23. Regarding claim 3, Gibbons discloses a multi-layer film wherein the caulk polymeric layer (a central sealing layer) is between the abuse-resistant resin (barrier layer) and the metal foil (figure 1).

24. Regarding claim 4, Gibbons discloses a multi-layer film wherein the barrier layer (abuse-resistance) such as polyamide polymer is surrounded by two tie layers (adhesive layers) (column 5, lines 40-45, figure 2).

25. Regarding claim 15, Gibbons discloses a multi-layer film wherein the metal is aluminum foil (column 5, lines 10-16).

26. Regarding claim 16, Gibbons discloses a multi-layer film wherein layer 10 (outer film) (figure 1) contacts with outer atmosphere (column 5, lines 1-2).

27. Regarding claim 18, Gibbons discloses multi-layer film wherein the barrier layer (abuse layer) may consist of polyamide (column 5, lines 40-45).

28. Regarding claim 21, Gibbons discloses multi-layer film wherein the barrier layer is part of inner film (figure 1 and 2).

29. Regarding claim 22, Gibbons discloses multi-layer film wherein the caulk polymeric layer (a connecting layer) is an extruded layer (claim 1).

Claim Rejections - 35 USC § 103

30. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

31. **Claim 17** is rejected under 35 U.S.C. 103(a) as being unpatentable over Gibbons et al. (U.S. Patent 4,983,431), as applied to claim 1, in view of Contemporary Polymer Chemistry.

32. Regarding claim 17, Gibbons discloses multi-layer film wherein the barrier layer comprises polyamide (column 5, lines 13-14). Gibbons does not explicitly disclose whether polyamide being aromatic or partly aromatic polyamide. Gibbons teaches that the high strength and heat resistant effectiveness are the problems even when polyamide compound are used as a barrier layer (column 2, lines 25-30).

33. It would have been obvious to one of ordinary skill in the art at the time of the invention to use aromatic polyamide or partly polyamide so-called aramid polymer (Kevlar – trade name of the Du Pont Company) to have high oxygen barrier stability (Contemporary Polymer chemistry by Harry R. Allcock, page 34), and to resolve heat resistance problem as mentioned by Gibbons.

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34. **Claims 5, 7, and, 23-25** are rejected under 35 U.S.C. 103(a) as being unpatentable over Gibbons et al. (U.S. Patent 4,983,431), as applied to claim 1, in view of Schaefer (U.S. Patent 4,986,053).

35. Regarding claim 5, Gibbons fails to teach a chromium-complex coating on the metal surface.

36. Schaefer discloses multi-layer laminate sheet wherein the metal surface is coated with a chromium complex polyacrylic acid in order to improve the adhesion between the metal and a layer (column 5, lines 45-50 and column 15, lines 18-21, figure 1).

37. It would have been obvious to one of ordinary skill in the art at the time of the invention to coat the metal layer of Gibbons with chromium complexed primer as taught by Schaefer so that adhesion between metal and a layer can be improved (column 5, lines 45-50).

38. Regarding claim 7, Gibbons discloses multi-layer film wherein the inner layer is made of polyethylene (24, figure 1), caulk layer (central sealing layer) is made of polyethylene (22, figure 1), outer layer is made of polyethylene (10, figure 1), tie layer (adhesive promoter) is made of modified polyethylene (column 7, lines 63-65) where polyethylene polymer is made of olefins monomers and to make polyethylene polymer it has to be modified from olefins monomers. So it may call modified olefins. Gibbon does not explicitly teach the connecting layer which functions as an adhesion between two layers.

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39. Schaefer discloses adhesive layer (connecting layer), which is made of polyethylene, next to the aluminum foil layer to bond with the layer next to it (figure 1).

40. It would have been obvious to one of ordinary skill in the art at the time of the invention to use adhesive layer of Schaefer in multi-layer structure of Gibbons to bond layer with better adhesion.

41. Regarding claim 23, Gibbons fails to teach an adhesion promoter between the barrier layer and the inner sealing layer and outer layer.

42 Schaefer discloses multi-layer laminate wherein the EVOH layer can serve as functional barrier (column 7, lines 14-18) and it is surrounded by adhesive layers in which the adhesive layers (adhesive promoter) between the barrier layer and the inner sealing layer and an outer layer (figure 1).

43. It would have been obvious to one of ordinary skill in the art at the time of the invention to use adhesive layers of Schaefer in laminate structure of Gibbons to have better adhesion between the layers.

44. Regarding claim 24, Gibbons fails to teach a chromium-complex coating on the metal surface.

45. Schaefer discloses multi-layer laminate sheet wherein the metal surface is coated with a chromium complex polyacrylic acid (column 5, lines 45-50, figure 1). In a general sense, lacquer is a liquid and clear or colored. Polyacrylic acid is in liquid form and it can be clear or white in color.

46. It would have been obvious to one of ordinary skill in the art at the time of the invention to coat the metal layer of Gibbons with chromium complexed primer

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which has lacquer type properties such as polyacrylic acid as taught by Schaefer so that adhesion between metal and a layer can be improved (column 5, lines 45-50).

47. Regarding claim 25, Gibbons discloses multi-layer film wherein said olefins are ionomers (column 2, lines 33-55).

48. **Claims 6, 19, and 20** are rejected under 35 U.S.C. 103(a) as being unpatentable over Gibbons et al. ((U.S. Patent 4,983,431), as applied to claim 1, in view of Schaefer (U.S. Patent 4,986,053) and in further view of Redding (U.S. Patent 4,659,408).

49. Regarding claims 6, 19, and 20, Gibbons discloses multi-layer film wherein the aluminum foil layer having a thickness of 7 μm – 12 μm (column 5, lines 7-12). Gibbons fails to teach other layers thickness.

50. Schaefer discloses multi-layer sheet wherein the layer of polyethylene layer (inner sealing layer) having thickness of 40 % of total thickness 0.09 mm (40 % of 0.09 mm is 0.036 mm = 36 μm), barrier layer and polyethylene (central having thickness of 20 % of total thickness 0.09 mm (20 % of 0.09 mm is 0.018 mm = 18 μm), two adhesive layers (adhesion promoter and connecting layer) having thickness of 10% of total thickness 0.09 mm (10 % of 0.09 mm is 0.009 mm = 9 μm) (column 8, lines 36-46). Schaefer is silent for outer layer thickness.

51. Redding discloses multi-layer sheet wherein the outer layer having a thickness about 20 μm – 30 μm (column 6, lines 17-20). Redding suggests the

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range of thickness to increase strength and improve deadfold (column 6 ,lines 8-10).

52. It would have been obvious to one of ordinary skill in the art at the time of the invention to use the thicknesses of Redding and Schaefer to prevent stress cracking and to improve packaging structures (column 17, lines 32-34).

Conclusion

53. Any inquiry concerning this communication or earlier communications from the examiner should be directed to SAMIR SHAH whose telephone number is (571)270-1143. The examiner can normally be reached on Monday to Friday from 7:30am to 5:00pm eastern.

54. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on (571)-272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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55. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/S.S./
SAMIR SHAH
Examiner, Art Unit 1794
August 05, 2009

/Callie E. Shosho/
Supervisory Patent Examiner, Art Unit 1794